

AN INVESTIGATION IN THE RELATIONSHIP
BETWEEN READING ACHIEVEMENT AND ATTITUDES
TOWARDS READING BY THIRD AND SIXTH
GRADE STUDENTS

CENTRE FOR NEWFOUNDLAND STUDIES

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AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN READING
ACHIEVEMENT AND ATTITUDES TOWARDS READING
OF THIRD AND SIXTH GRADE STUDENTS

A Thesis
Submitted to
The Department of Curriculum and Instruction
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ABSTRACT

The purpose of this study was to investigate the possibility of a statistically significant relationship between attitudes toward reading and reading achievement in grades three and six.

The sample consisted of one hundred and fifty students from three different schools under the jurisdiction of the Avalon Consolidated School Board. The students comprised all of the grades three and six students in the aforementioned schools. All students were administered the Gates-MacGinitie Reading Tests and the Estes Reading Attitude Scale. The Gates-MacGinitie Reading Test measured achievement, whereas the Estes Reading Attitude Scale measured attitude towards reading.

After the data was collected, an initial interpretation was undertaken by running frequency distributions and histograms using the raw data. These distributions were used to place the data into categories of high, average, and low reading and positive, neutral and negative attitudes.

A one-way ANOVA was used in the final interpretation to measure the interactions of reading achievement with attitudes towards reading in grades

three and six. . A two-way ANOVA was used to determine the influence of grade on the interaction of reading and attitude toward reading. This was also used to determine the effect of sex on the interaction of reading achievement and attitude towards reading.

At the .05 level of confidence, statistical analysis supported the theory that attitude and reading are directly related. It was found that attitudes affect reading in grades three and six. One unanticipated finding was that sex was not a determinant of differences in reading comprehension for grade three pupils. However, by grade six, there was a strong relationship between sex and reading, in favor mainly of girls. The investigator's subjective interpretation was that there should be more done in the schools to foster positive attitudes towards reading, especially with boys in the elementary grades.

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CHAPTER I

INTRODUCTION

Background of the Study

Reading achievement has been associated with many factors. Monroe and Backus (1973) propose that it is influenced by five general factors: constitutional, intellectual, environmental, emotional, and educational. Constitutional factors would be comprised of such things as chronological age, physical well being, and the presence or absence of handicaps in speech, vision or hearing.

Another factor that has long been linked with good and poor achievement in reading is the socioeconomic class of the learner. Hanson (1969) studied the impact of the home literary environment on reading attitude. She found a significant statistical correlation and concluded that parents might well consider the effect the early environment has on later reading patterns.

Reading preferences also seem to be affected by socioeconomic class. Boys and girls from middle and low socioeconomic groups, for example, tend to read first for recreational purposes, then for informative, /

identification, and aesthetic purposes (Emans & Patyk, 1967).

Barton (1963) concluded from his work that the single most significant factor in progress in reading achievement at school is socioeconomic class.

Feldman and Weiner (1964), on the other hand, found no significant difference in reading achievement between the groups of lower and middle class elementary children they studied. This illustrates the different findings of the effect of various factors on achievement.

The sex of the student has also been related to achievement. Boys tend to score lower on reading achievement tests than do girls on similar tests. Askov and Fischback (1973) studied the attitude of both sexes in relation to reading achievement. Their findings indicated that in both grades one and three mean attitude scores for girls were significantly higher than for boys, both before and after statistically removing the effects of achievement.

Somewhat similarly, Hanson (1969) remarked that girls show a significantly higher reading attitude than boys and read a significantly greater number of books.

The intelligence of the child has also been associated with reading success or failure. Lieblich and Shinar (1975) studied middle class Israeli children, measuring IQ with a Hebrew version of the WPPSI. They

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found a significant relationship between subjects' IQ and reading achievement.

Yet another factor that educators have associated with achievement is the attitude that the child has toward the task. Bloom, Krathwohl and Mansia (1964) in their Taxonomy of Educational Objectives: Affective Domain, define the affective domain as subsuming such traits as temperament, attitude, belief, interest, and value. Schools seem to exist for the cognitive domain of learning. The affective domain is often overlooked as an area that necessitates specific instruction. The irony of this is that attitudes toward what they learn are strong determinants of what students choose to study or learn in the future (Estes & Vaughan, 1978).

Reading attitude and achievement seem to mirror other subject areas with researchers conducting studies to ascertain if indeed attitude is a factor related to achievement. Estes (1971) stated how students feel about reading is as important as whether they are able to read, for, as is true of most abilities, the value of reading ability lies in its use rather than in its possession. Ramsey (1962) conducted a study to determine what factors help to determine a good or poor reader. He found poor and good readers to be clearly different in terms of sex, level of intelligence, and length of time in attendance at their present school. Distinct differences

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were also found in the number of books owned and read, adequacy of time to read, reading self-concepts, and felt reading needs.

Fader and McNeil (1969) undertook the task of improving the reading performance of students in an inner-city school, where most students had a very low reading achievement. They say we must take careful and unremitting aim at the child's attitude before we can expect to see any lasting effect upon his performance.

Therefore, it appears from research that many factors, including attitude, may play a significant role in helping to determine if a child is to be a good or poor reader.

Introduction to the Problem

Whether one agrees with the consensual belief that students who enjoy reading will become better readers, or prefers empirical support such as that offered by Askov (1972) and Levenson (1972), there is reasonable evidence to suggest that reading performance and attitude toward reading are related (Chester & Dulin, 1977).

Lewis (1980) reported that scores from a reading attitude inventory correlated with combined scores on the subtests of reading from the Metropolitan Achievement

Tests. He concluded that attitude toward reading activities, as measured by this self-report instrument, had a statistically significant relationship with reading success.

Ransbury (1973) surveyed fifth and sixth graders. The children, their parents, and their teachers were asked to describe the reading behaviours of one person who apparently enjoyed reading and the behaviours of one person who did not seem to like to read. The results showed that children attribute their own reading attitude primarily to their reading ability.

Attitudes to reading may be changed and these may produce a change in achievement. Results of a longitudinal study by Healy (1965) showed significant difference in attitude change and achievement by fifth year students in an experimental setting when paired with fifth grade students not in an experimental setting.

Hall (1978) conducted a study of three hundred fifth grade pupils to study relationships among attitudes toward reading, reading achievement, socioeconomic status, and sex. Based on the study it appeared that neither social class nor sex is a reliable indicator of how students feel about reading. Attitudes and achievement in reading are highly correlated: when ability improves, attitudes often improve; when attitudes improve, ability often improves.

Groff (1962) studied the relationship between the expressed attitudes of fifth and sixth grade students toward four content type materials and their critical reading scores. The findings indicated a significant correlation. The investigator suggested that "the reading comprehension of an individual child as he reads is influenced to a degree by his attitude toward content type of material being read."

Rowell (1972) investigated factors related to change in attitude toward reading. He found statistically significant relationships in four areas. These were between change in attitude toward reading and achievement in (1) recognition of words in isolation, (2) level of comprehension, (3) recognition of letter sounds, and syllabication.

It would appear from the above studies that there is some evidence of a correlation between attitude and achievement.

Rationale for the Study

The relationship between attitude toward reading and achievement is one that has been speculated upon and questioned by many educators, yet little research has been done to determine the relationship. If educators knew that good readers have positive attitudes toward

reading while poor readers have negative attitudes, they would better be able to improve students' reading by improving their attitude. Estes and Vaughan (1978) said that

The implications of what we know about attitude are none too clear. However, certain factors are both important and amenable to change. These include curriculum factors, the physical setting, pupil characteristics, and teacher characteristics. With attention to the details of these factors, directions of pupil attitude change may become more positive. (p. 199)

Thorndike (1935), from a psychological point of view, considers interest, events, and attitudes to be influential factors in learning. The active attitude he says can be considered to be a part of the "total dynamic system of the person at the time."

If educators knew that students have high attitudes despite low achievement, then they would be better prepared to provide the time and reading materials for these students to improve their reading. Roettger (1980) contends that

Knowing which students have high attitudes despite low achievement scores will help teachers take care to provide opportunity for these students to do free reading despite time pressures, and knowing which students read only to achieve a goal will help teacher and librarians focus on locating the right books to stimulate these youngsters to read more. (p. 453)

Dulin and Chester (1974) state that teachers who want students to adopt reading as a lifelong leisure-type activity should consider two things: (1) that the attitudes their students hold are as important to these teachers as are the skills they've mastered, and (2) by extension that the measurement of these attitudes is as important to them in an overall evaluation of their instructional success as is the measurement of their students' specific skills.

One of the inherent problems in measuring such an intricate and nebulous area as attitude is the type of instrument that would best determine it. Whereas there are endless tests to evaluate students' achievement in reading, there are few valid measures of reading attitude.

A recently developed instrument for measuring attitude to reading is the Estes Scale to Measure Attitudes Toward Reading (Estes), validated by Estes in 1971. • Summers (1980) examined the internal consistency, reliability, and convergent validity of the scale for intermediate grades, and concluded that the Estes is useful in obtaining a global reactive assessment of school-oriented attitude toward reading in the intermediate grades.

Chester and Dulin (1977) were concerned about the need for accurate instruments capable of yielding accurate measures of students' attitudes. In an

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experimental study they utilized three different approaches to measure reading attitudes. These were the Dulin-Chester, the Estes, and the Reading Weights Inventory. The results indicated that the combined score for the total battery of instruments clearly comprised the best means of distinguishing five separate reading attitude groups. He attributed the strength of the combined score to the fact that the individual tests measured different aspects of reading.

Estes and Johnstone (1974) conducted a study to see to what degree the Estes actually does measure students' attitude toward reading. Data were collected from 641 high school students. Various methods of testing attitude were used. They concluded that each alternate method of assessing attitude toward reading correlates more highly with the Reading Attitude Scale than with any other measurement method.

Thus, it would seem worthwhile to use the Estes to measure reading attitudes, for if there is a significant correlation between attitudes and achievement we can then attempt to improve our students' reading.

Statement of the Problem

The objective of this study is to investigate whether or not there is a significant statistical

correlation at the .05 level of significance between attitudes toward reading and reading achievement in grades three and six.

Significance of the Study

Findings of the studies reviewed suggest that more research should be done to determine the relationship between attitude and achievement. As Rihgness (1975) remarked, "The fact that attitudes and values are learned presents us with our greatest hopes for the future."

Ramsey (1962) studied characteristics of pupils of high and low reading ability. The characteristics studied included attitudes and interests. At the end of his study he stated that "the study reaffirms the need for more research in the area of differences between poor and good readers" (p. 94).

Hanson (1969) conducted a study to investigate the influence of the environment on a child's independent reading attitude. Her results showed no significant relationship, but she concluded that "little research has been done which investigates what factors in a child's life significantly affect his attitude to reading and his ability to read" (p. 20).

The editors of the International Reading Association's monograph, Attitudes and Reading,

Alexander and Filler (1976); said that

It appears that certain instructional programs can but do not necessarily lead to improved attitudes. In addition, there is some basis for feeling that student self-concept and interest and the attitudes of parents and teachers may affect attitudes toward reading. (p. 16)

Hall (1977) stated that

A careful study of reading research journals from the past two decades revealed a lack of information in the literature dealing with comparative studies of attitudinal differences among socioeconomic groups. Nor is there much research dealing with attitudes, achievement in reading, and socioeconomic class. (p. 3)

It would, therefore, seem worthwhile to attempt to investigate the relationship between reading attitudes and reading achievement.

Hypotheses

The following null hypotheses were tested. If significant relationships were found at the .05 level of confidence between the variables, the null hypotheses were rejected.

1. There will be no significant relationships between sex and reading achievement, grade and reading achievement, and attitude and reading achievement for all students included in the sample.
2. There will be no significant relationships between sex and reading achievement, and attitude and

reading achievement in the grade three sample.

3. There will be no significant relationships between sex and reading achievement and attitude and reading achievement in the grade six sample.

4. There will be no significant relationships between attitude and reading achievement for the grade three high reading achievement students.

5. There will be no significant relationships between attitude and reading achievement for the grade six high reading achievement.

6. There will be no significant relationships between attitude and reading achievement for the grade three average reading achievement students.

7. There will be no significant relationships between attitude and reading achievement for the grade six average reading achievement students.

8. There will be no significant relationships between attitude and reading achievement for the grade three low reading achievement students.

9. There will be no significant relationships between attitude and reading achievement for the grade six low reading achievement students.

10. There will be no significant relationships between grade and attitudes toward reading for all students included in the sample.

11. The joint effects of sex and attitudes on

reading will be insignificant for all grade three students in the sample.

12. The joint effects of sex and attitudes on reading will be insignificant for grade six.

13. None of the effects of grade level, sex or attitude on reading will be significant for all students in the sample.

Methodology

The purpose of this study was to ascertain whether or not there was a significant statistical relationship between reading attitude and reading achievement within grades three and six as measured by standardized instruments.

Two tests were used in the study, the Gates-MacGinitie Reading Test, American Edition (1968), primary and elementary levels, and the Estes.

The Gates-MacGinitie Reading Tests (Gates) are a series of tests designed to measure group and individual achievement from kindergarten through grade twelve. The grade three groups were given Level C, suitable for that grade, and the grade six groups were given Form D. The tests were administered according to the procedure outlined in the examiner's manual.

The Estes is a test which measures attitudes toward reading. It is a summated rated Likert scale, on which subjects respond to questions on a five-point measure of strongly agree to strongly disagree. The investigator read the Estes to the subjects in both grades three and six, thus eliminating any problems younger children or remedial students would have had with the printed version.

The population for this study was the grades three and six classes from three different schools under the jurisdiction of the Avalon Consolidated School Board. This amounted to approximately 150 subjects, from heterogeneously-grouped classes.

Grades three and six were chosen partially to investigate whether there is an attitude difference between primary and elementary grades. It is also of interest to compare subjects from both the primary and elementary grades since in each the role of reading is somewhat different. The primary children are learning the mechanics of how to read and the elementary children are learning how to use their reading to acquire other information and knowledge.

The schools selected were similar in the fact that they are all rural schools lying on the outskirts of the metropolitan St. John's area. The children attending these schools were from a diversified socio-

economic background.

After collection of the data, an initial interpretation was undertaken by running frequencies and histograms using the raw data. These distributions were used to place the data into categories of high, average, and low achievement and positive, neutral, and negative attitudes.

The interpretation of these distributions was for all grade six students, all grade three students, all grade three boys, all grade three girls, all grade six boys, and all grade six girls.

The final interpretation of the data was to measure the interactions of reading achievement with attitudes toward reading in grades three and six by using a one-way ANOVA. The influence of grade on the interaction of reading and attitude toward reading was measured by using a two-way ANOVA. This data was used to determine the effect of sex on the interaction of reading achievement and attitude toward reading.

It was hoped that the analysis of variables in the study would release valuable information regarding the correlation of reading achievement and attitude toward reading. The analysis would be followed by recommendations, based on the findings of the study.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The review of literature is organized into three main sections. Much has been written on the relationship of reading and the cognitive domain. In contrast, far less literature has been published on the relationship of reading and the affective domain. Thus, the first section deals with research that supports a more thorough investigation of the affective domain. The second section deals with attitudes toward reading in terms of what comprises these attitudes, how they develop in a positive or negative sense, and specific research studies that have investigated attitudes and reading success. The third section discusses reading achievement and factors researchers have found to improve or impair achievement.

Reading and the Affective Domain

Bloom, Krathwohl, and Masia (1964) in the Taxonomy of Educational Objectives, Affective Domain, defines the

affective domain as subsuming such traits as temperament, attitude, belief, interest, or value. Shaw and Wright (1967) point out

If the attitude of a person toward a given object, or class of objects is known, it can be used in conjunction with situational and other disproportional variables to predict and explain reactions of the person to the class of objects. (p. 2)

Freeman (1934) said

It is an accepted view among child psychologists that although very young children and even infants manifest innate dispositional differences the experience and learning during the early years of childhood, say up to the age of six or eight, are of special importance in the determination of an individual's traits of temperament and personality and even in the fashioning of attitudes. (p. 49)

One component of the affective domain is self-concept. Self-concept may be defined as an individual's perception of himself or herself (Moustakes, 1956). This self-perception is said to determine how the individual will behave. In one study, Bailey (1971) sought to investigate self-concept differences in low and high achieving college students. The results supported the notion that there are differences in self-perceptions between achieving and underachieving students with below average ability. Furthermore, the investigator concluded that the student's self-conceptions of his/her academic ability are worthy of close consideration by

both researcher and counselor and have important implications for understanding the role of non-intellectual factors in academic performance.

Somewhat similarly, Cole (1974) investigated the relationship between self-concept, attitude, and "achievement motivation" of average third grade students and their academic achievement. The results yielded low, positive, and significant correlation coefficients for self-concept and achievement motivation in all achievement areas, with the exception of spelling. The investigator stated that "there seems to be no doubt that factors other than aptitude, as it is measured in education at this time, interact with actual achievement" (p. 333).

Quandt (1972) indicated that teachers may affect a student's self-concept in many ways. He stated that the following behaviours and instructional practices were important:

Teacher behaviours, such as accepting the student as a valued person; reducing negative comments; making the student's successes known to others; putting reading failure in proper perspective to success in other areas; working with parents in order to provide a more positive supportive home environment. (p. 7)

One of the non-cognitive factors which has recently been noted as affecting learning is the student's perceived ability to control the forces which affect his

life. This characteristic has been labelled "locus of control" by Roetter (1966) who defines it in the following manner:

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual we have labelled this belief in 'external control'. If the person perceived the event as contingent upon his behavior or his own relatively permanent characteristics we have termed this belief in 'internal control'. (p. 14)

This "locus of control" has been shown to affect significantly the student's learning abilities, especially those who feel that their efforts have a relationship to outcomes.

Eldridge (1981) investigated the relationship of self-concept, locus of control and reading achievement with fourth grade students. He found that high reading achievement scores were significantly related to high self-concept scores and to internal "locus of control" scores. Low reading achievement scores were significantly related to low self-concept scores and to external locus of control scores.

Attitudes Toward Reading

For centuries educators have speculated that attitude and interest may have a relationship to success with reading. Even Shakespeare supported the notion that people study what they like to learn when he said, "No profit grows where is no pleasure taken." Yet, although there has been much speculation, there has been little research done on the relationship of pupil's attitude and the acquisition of reading skills. In their overview of work on attitude and reading, Alexander and Filler (1976) state that a positive attitude is "essential for successful mastery of the written page" (p. 1), while noting that little research has been done on relationship between reading attitude and achievement.

Squire (1969) outlined some things that research in reading reveal about attitudes toward reading. He suggested that research demonstrates that methods of teaching and conditions of teaching can affect an individual's attitudes toward reading. He remarked that

The attitudes which readers bring to a book and the attitudes which they derive from their reading are intimately related both to the process of reading itself and to the personal qualities of the reader. (p. 530)

In the relatively small number of published research studies done on the relationship between reading attitude and achievement in children, the results are inconsistent. Certain studies and their findings will be reviewed to illustrate this inconsistency.

Lewis (1979) studied the relationship between attitude toward reading and reading success. Subjects were 149 third, fourth, and fifth grade pupils. Their scores from a reading attitude inventory were correlated with combined scores on the subtests of the Metropolitan Achievement Tests. The findings were statistically significant with the reading attitude inventory correlating .17 ($p < .05$) with scores from the achievement test. Although statistically significant, this finding suggests that the inventory did not reflect an attitudinal construct that was a major factor in reading success for the sample studied.

Somewhat similarly, Rowell (1972) investigated the relationship between change in attitude toward reading and, in turn, achievement in the basic word identification skills, achievement in selected comprehension skills, change in level of comprehension, achievement in reading, vocabulary, sex, socioeconomic status, and age. The subjects were thirty students from grades four to eight, who had been enrolled in a corrective reading summer school. A control group was also

used to determine if change in attitude toward reading and reading achievement made by the experimental group could be attributed to the corrective program. The findings showed that students in the experimental group made significantly greater gains than the students in the control group in both change in attitude toward reading and achievement in most of the skills tested. Statistically significant relationships were found in only four areas. These were between change in attitude toward reading and achievement in (1) recognition of words in isolation, (2) level of comprehension, (3) recognition of better sounds, and (4) syllabication.

The study by Groff (1962) was designed to investigate the relationship between fifth and sixth grade children's expressed attitudes toward four different context types of reading material and their scores on an experimental test of critical reading. The subjects were 305 fifth and sixth grade students who were given three attitude questionnaires and an experimental reading test consisting of reading for immediate recall and critical reading. The results suggested that the reading comprehension of an individual child, as he reads, is influenced to a degree by his attitude toward the context type of material being read. Overall, it indicated that attitude toward reading as a school activity has an important enough effect on the other

variables of the study to warrant serious consideration.

The purpose of a study by Healey (1963) was to determine the influence of initial reading experience upon attitudes toward reading. The study was longitudinal, running from 1955 to 1958 with two fifth grade heterogeneous groups of children, in an experimental group and a control group, from all socioeconomic levels. The findings revealed that favourable attitudes produce significant achievement and more reading. Experimental subjects achieved more and read more with differences significant at the .01 level. Also, changes in attitude persisted in junior high and influenced achievement and reading habits.

Engin (1979) conducted a study to investigate developmental changes in reading attitudes during the intermediate grades. Subjects were 431 intermediate grade students who were administered a Survey of Reading Attitudes to measure eight dimensions of reading attitude. The results of an ANOVA indicated significant patterns of change for the following dimensions of the survey: Expressed Reading Difficulty, Reading as Direct Reinforcement, Silent Vs. Oral Reading, and Comics. In contrast, the Reading as Enjoyment Alternative Learning Models, and Reading Group dimensions failed to show appreciable developmental changes.

However, Greenburg, Gerver, Chall, and Davidson (1965) did not find more favourable attitudes among good readers than among poor readers in their study of 115 black fourth grade children from a deprived area. The investigators devised a semantic differential instrument to measure attitudes and they also administered the Metropolitan Primary Reading Test. The researchers stated inconsistent findings between their study and other studies which had found significant relationships between attitude and achievement. They said this may have resulted from the type of criterion instrument used, the nature of the setting, and the composition of the group.

Research Related to Reading Achievement

Recent research suggests that students' achievement may be affected by teacher attitudes toward reading. Mueller (1973) stated that

Since teachers teach what they themselves stand for, pupils are certain to be affected when the teacher shows excitement and enthusiasm over a book; they will be no less affected by a teacher's apathy toward reading. (p. 202)

Schofield (1980) conducted a study to ascertain if teachers' attitudes affected students' attitudes and achievement. Reading attitude and achievement tests were administered to 251 final year student teachers and

to 900 pupils of 48 of these teachers twice in a one year period. Findings indicated that high achievement and high attitude in teachers were positively associated with high achievement and high attitudes in pupils; in the pupils of low achievement and low attitude teachers' achievement was low, but attitudes were more favourable than those expressed by the pupils of middle achievement and middle attitude teachers.

Somewhat similarly, Brown and Sherbenou (1981) compared teacher perceptions of student reading ability, reading performance, and classroom behaviour. Subjects were given the Test of Reading Comprehension, the Stanford Diagnostic Reading Test, and the Teacher Rating Scale of the Behaviour Rating Profile. Data revealed low moderate correlations between children's reading scores on standardized tests and teachers' rank ordering of the children in their classes, but high correlations between teachers' evaluations of the children's behaviour and that same rank ordering of the children by perceived reading ability. The investigators concluded that an unusually strong relationship exists between students' academic skills and teacher perceptions of the students' non-academic classroom behaviour.

Palardy (1969) conducted a study to determine whether teacher beliefs about the probable success of first grade boys had any significant effect on reading

achievement. Five teachers who believed that boys would be less successful than girls in learning to read were matched with five teachers who believed that boys would be as successful as girls. The results showed that boys were indeed less successful in the classrooms of teachers who believed they would be less successful than girls. The reverse was also true; the data revealed that boys were as successful as were girls in the classrooms in which teachers felt that boys would be successful.

The study by McWilliams and McWilliams (1976) investigated the impact that reading teachers had on their students' personalities and subsequent attitudes toward reading. An experimental group received one-to-one tutorial instruction and the control group received one-to-many instruction. The groups were matched on significant variables and each received both a pre-test and a post-test administration of the Nowicki Strickland Locus of Control Scale for Children. Findings showed that members of the experimental group increased their internal perceptions significantly while members of the control group showed no significant change by the end of the ten week experimental period. Concerning achievement, they concluded that student's learning is more effective in a one-to-one tutorial setting than in a larger academic setting.

Shannon (1980) studied the effects of methods of standardized reading achievement test administration on attitude toward reading. Subjects were 120 tenth grade students, randomly assigned to one of four treatment groups. (1) In the "Counselled Group," students were first counselled about the nature and purpose of the test they were to take, namely the Nelson Denny Reading Test, Form C. Upon completion of the test they were counselled about their scores, and then they completed an attitude survey. (2) The "Score Only Group" was given the Nelson Denny Reading Test, Form C, their scores were reported to them, and then they completed the attitude survey. (3) The "No Score Group" was given the Nelson Denny Reading Test, Form C, followed by the attitude survey but they did not learn what their scores on the reading achievement test had been. (4) A "Control Group" filled out the attitude survey, but did not take the reading test.

Analysis of the data showed that reading attitude scores, as measured on the thirty-five item instrument, were significantly affected by both (1) the method of giving the test, and (2) the students' reading achievement levels. The overall correlation between attitude and achievement was .51. Shannon stated that this study supported the common sense observation that subjects who score highest on achievement also have the most positive attitude toward reading.

The authors of Hooked on Books, Fader and McNeil (1969), conducted a year long program to encourage students who were bored or apathetic to enjoy reading and writing. Subjects were 120 high school boys from a low socioeconomic background who were randomly placed in an experimental or a control group.

The philosophy of the program was based on the concept of "English in Every Classroom", which was made up of two main components--saturation and diffusion. Saturation meant the students in the experimental group were virtually surrounded with newspapers, magazines, and paperbound books. Diffusion meant the students used these written forms in relationship to the world outside the school building. The authors remarked, "Not only do newspapers, magazines, and paperbound books enable the student to deal with the world as it is, but they invite him to do so" (p. 17).

All subjects were given The Stanford Achievement Test and the Verbal Proficiency Test as pre- and post-tests.

The authors of the program concluded,
Results of the Verbal Proficiency Test and the Stanford Achievement Test were congruent with one another and confirmed our hopes when we designed the experiment initially: where it finally counts--in performance--English in Every Classroom was a vital part of the educational experience available to boys at Maxey School. Furthermore, these changes in

performance were directly attributed to a 'change in feeling' generated by a change in methods and materials employed in the teaching of English. (p. 214)

In summary, research seems to indicate a strong correlation between attitude and achievement. Most of this research has been conducted within the last decade, and is rather sparse in quantity. Most investigators have made strong recommendations for more studies of this area, as many are convinced that achievement would be greatly improved if educators were to more seriously consider the impact that the affective domain has on the learning situation. Since an important goal of reading instruction is to promote lifelong reading habits, it seems vital to promote positive attitudes toward reading from the start.

CHAPTER III

SOURCES OF DATA: METHOD AND PROCEDURE

Introduction

This chapter presents an overview of the procedures to be used in the study. It describes the setting for the study; the selection of the subjects; the testing instruments used; the design and hypotheses, the method and procedure for data collection; and the treatment of the data.

Setting for the Study

This study took place in three schools on the outskirts of St. John's, a city located on the eastern coast of Newfoundland, with a population of approximately 130,000 inhabitants. The schools selected were similar in the fact that they were all rural schools lying on the outskirts of the metropolitan St. John's area. One of the schools differed in geographic situation because it is an island lying approximately five miles off the coast of Newfoundland, yet it is only thirteen miles from St. John's. The children attending these schools came

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from a diversified socioeconomic background. This was determined by consulting the school records which listed the parents' occupation or employment status.

At the time this study was conducted, the investigator was employed by the Avalon Consolidated School Board as an itinerant reading specialist who visited these schools weekly. The subjects were all the grades three and six classes from these schools. This amounted to a total of seven classes, and approximately 150 subjects, which were all heterogeneously grouped. It was assumed that there would be a random array of achievement levels and attitudes in these classes.

Grades three and six were chosen partially to investigate whether there is an attitude difference between primary and elementary grades. It was also of interest to compare subjects from both primary and elementary grades since, in each, the role of reading is somewhat different. The primary children are learning the mechanics of how to read and the elementary children are learning how to use their reading to acquire other information and knowledge.

The Testing Instruments

Two tests were used in the study, the Gates-MacGinitie Reading Test, primary and elementary levels,

and the Estes.

The Gates-MacGinitie Reading Tests are a series of tests designed to measure group and individual achievement from kindergarten through grade twelve. The grade three groups were given level C, suitable for that grade, and the grade six groups were given the appropriate test level D. The tests were administered according to the procedure outlined in the examiner's manual. The achievement test was administered the same week to all subjects.

The Teacher's Manual (MacGinitie et al., 1978) provides information on test administration, standardization, validity, reliability and test scoring. The norms for the Gates-MacGinitie Reading Test were developed by administering the tests to a nationwide sample of approximately 40,000 students in 37 communities. The communities were carefully selected to be representative on the basis of size, geographical location, educational level, and family income.

The Gates-MacGinitie Test was criticized in the Seventh Mental Measurements Yearbook (Buros, 1972) by Burke who remarked:

Though there is a teacher's manual for each level and a technical manual for the entire test, the authors do not present their view of the reading process or their rationale for the focus of the test. Such information must be surmised from the material itself. (p. 1080)

However, the Gates was used as a testing instrument because, as previously mentioned, the credentials of the test appear to be well researched. Also, this test has been used by the Avalon Consolidated School Board for many years and, in this context, has been found both useful and valid.

^ Estes is a test which measures attitudes toward reading. It is a summated rated Likert scale, on which subjects respond to questions on a five-point measure of strongly agree to strongly disagree. The investigator administered the test to all subjects in each class during the same week. The Estes was also read to the subjects in both grades three and six, thus eliminating any problems younger children or remedial students would have had with the printed version. The subjects then recorded their responses by circling the correct response.

Method and Procedure

Testing was carried out by the investigator, from May 8 to May 21, 1982. Its main purpose was to ascertain whether or not there was a significant statistical correlation between reading attitude and reading achievement within grades three and six as measured by standardized instruments. The administration and scoring of both tests was done in the exact manner specified in the test manual.

Procedure in the Treatment of Data

After collection and scoring of the data, an initial interpretation was undertaken by running frequencies and histograms using the raw data. These distributions were used to place the data into categories of high, average, and low achievement and positive, neutral, and negative attitudes. The interpretation of these distributions was for all grade six students, all grade three students, all grade three boys, all grade three girls, all grade six boys, and all grade six girls. The specific hypotheses stated in null terms, examined at the .05 level of confidence, in the study were as follows:

1. There will be no significant relationships between sex and reading, grade and reading, and attitude and reading, for all students included in the sample.
2. There will be no significant relationships between sex and reading, and attitude and reading in the grade three sample.
3. There will be no significant relationships between sex and reading, and attitude and reading in the grade six sample.
4. There will be no significant relationships between attitude and reading for the grade three high reading achievement students.
5. There will be no significant relationships between attitude and reading for the grade six high

reading achievement students.

6. There will be no significant relationships between attitude and reading for the grade three average reading achievement students.

7. There will be no significant relationships between attitude and reading for the grade six average reading achievement students.

8. There will be no significant relationships between attitude and reading for the grade three low reading achievement students.

9. There will be no significant relationships between attitude and reading for the grade six reading achievement students.

10. There will be no significant relationships between grade and attitudes toward reading for all students included in the sample.

11. The joint effects of sex and attitudes on reading will be insignificant for all grade three students in the sample.

12. The joint effects of sex and attitudes on reading will be insignificant for grade six.

13. None of the effects of grade level, sex, or attitude on reading achievement will be significant for all students in the sample.

The final interpretation of the data was to measure the interactions of reading achievement with

attitudes toward reading in grades three and six by using a one-way ANOVA. The influence of grade on the interaction of reading and attitude toward reading was undertaken by using a two-way ANOVA. This was also used to determine the effect of sex on the interaction of reading achievement and attitude toward reading.

CHAPTER IV

FINDINGS AND DISCUSSION

This chapter is divided into two sections. In the first section the specific findings of the study are considered in relation to the hypotheses formulated in Chapter One. The second section discusses the implications of these findings.

Hypothesis 1: There will be no significant relationships between sex and reading, grade and reading, and attitude and reading, for all students included in the sample.

In Table IV.1 the correlation coefficients, means, and standard deviations for Hypothesis 1 variables are presented. The null hypothesis was rejected in each instance since the correlations between sex and reading, grade and reading, and attitude and reading were significant at the .001 level.

Hypothesis 2: There will be no significant relationships between sex and reading, and

attitude and reading in the grade
three sample.

TABLE IV.1

CORRELATION COEFFICIENTS, MEANS, STANDARD DEVIATIONS, FOR
READING COMPREHENSION FOR ALL STUDENTS IN THE SAMPLE^a

Variables	Sex	Grade	Attd.	Read.	\bar{X}	SD
Sex	1.000	.026	ns	.001	1.46	.500
Grade	.174	1.000	ns	.001	4.5	1.50
Attd.	.139	.066	1.000	.001	70.3	9.53
Read.	.284	.507	.379	1.000	51.4	18.0

a. Correlation coefficients are presented below the diagonal; the significance level of the relationship is presented above the diagonal.

Boys = 1
Girls = 2

The findings for Hypothesis 2 are presented in Table IV.2. In Table IV.2 the attitude-reading relationship was significant. The null hypothesis for sex and reading at the grade 3 level was rejected. Also, the attitude-reading hypothesis was rejected because the relationship was significant at the .001 level. This finding was consistent with the hypothesis that children's

reading is influenced by attitude. This thesis has recently been promoted by Bettelheim and Zelan (1981) who remarked, "A child's attitude toward reading is of such importance that, more often than not, it determines his scholastic fate" (p. 25).

TABLE IV.2

CORRELATION COEFFICIENTS, MEANS, STANDARD DEVIATIONS FOR READING COMPREHENSION FOR ALL GRADE THREE STUDENTS

Variables	Sex	Attd.	Read.	\bar{X}	SD
Sex	1.000	ns	.036	1.37	.488
Attd.	.096	1.000	.001	69.6	9.96
Read.	.218	.393	1.000	42.3	13.42

Hypothesis 3: There will be no significant relationships between sex and reading, and attitude and reading in the grade six sample.

Table IV.3 presents a table of the correlation coefficients, means, and standard deviations for reading comprehension of the grade six students in the sample. The null hypothesis was rejected for both relationships.

In a bivariate analysis the sex differences and reading relationship at the grade six level was significant at the .05 level, favouring girls. /This finding is congruent with the theory Geschwind and Behau (1982) reported in the 1982 proceedings of the National Academy of Sciences. As predicted, the attitude-reading relationship was significant at the .001 level.

TABLE IV.3

CORRELATION COEFFICIENTS, MEANS, STANDARD DEVIATIONS FOR READING COMPREHENSION FOR ALL GRADE SIX STUDENTS

Variables	Sex	Attd.	Read.	\bar{X}	SD
Sex	1.000	ns	.022	1.55	.501
Attd.	.165	1.000	.001	70.9	9.10
Read.	.242	.419	1.000	60.5	17.41

Hypothesis 4: There will be no significant relationships between attitude and reading for the grade three high reading achievement students.

Table IV.4 presents the results of an analysis of variance for the relationship between attitudes and reading

for grade three high reading achievement students. The F ratio was not significant at the .05 level of confidence. Therefore, hypothesis 4 was accepted. As may be noted from the R-square statistic reported in Table IV.4, attitude was not a predictor of reading comprehension for "good" grade three readers because good readers seem to have uniformly positive attitudes toward reading.

TABLE IV.4

ANALYSIS OF VARIANCE FOR THE RELATIONSHIP BETWEEN ATTITUDES
AND READING: GRADE THREE, HIGH READING
ACHIEVEMENT STUDENTS.

Effects	Sum of Squares	df	F	p
Attitude	.57.689	2	.537	ns
Total	970.798	19		
R-Square	.059			

Hypothesis 5: There will be no significant relationships between attitude and reading for the grade six high reading achievement students.

Table IV.5 presents the results of an analysis of variance for the relationship between attitudes and

reading for all grade six high reading achievement students. The F ratio was not significant at the .05 level of confidence. Therefore, hypothesis 5 was accepted. The R-square of .010 indicated that for 'good' readers attitudes were of negligible importance in accounting for variation in their reading comprehension.

TABLE IV.5

ANALYSIS OF VARIANCE FOR THE RELATIONSHIP BETWEEN ATTITUDES
AND READING: GRADE SIX, HIGH READING
ACHIEVEMENT STUDENTS

Effects	Sum of Squares	df	F	p
Attitude	12.033	1	.133	ns
Total	1189.732	14		
R-Square	.010			

Hypothesis 6: There will be no significant relationships between attitude and reading for the grade three average reading achievement students.

In Table IV.6 the results of an analysis of variance for the relationship between attitudes and reading for grade three average reading achievement

students is presented. The F ratio was not significant at the .05 level of confidence. Therefore, preliminary hypothesis 6 was accepted.

TABLE IV.6

ANALYSIS OF VARIANCE FOR THE RELATIONSHIP BETWEEN ATTITUDES
AND READING FOR GRADE THREE AVERAGE READING
ACHIEVEMENT STUDENTS

Effects	Sum of Squares	df	F	p
Attitude	49.612	2	.860	ns
Total	683.998	24		
R-Square	.073			

Hypothesis 7: There will be no significant relationships between attitude and reading for the grade six average reading achievement students.

Table IV.7 presents the results of an analysis of variance for the relationship between attitudes and reading for the grade six average reading achievement students. The F ratio was not significant at the .05 level of confidence. Therefore, preliminary hypothesis 7 was accepted.

TABLE IV.7

ANALYSIS OF VARIANCE FOR THE RELATIONSHIP BETWEEN ATTITUDES
AND READING FOR GRADE SIX AVERAGE READING
ACHIEVEMENT STUDENTS

Effects	Sum of Squares	df	F	p
Attitude	43.964	2	.452	ns
Total	1405.546	30		
R-Square	.081			

Hypothesis 8: There will be no significant relationship between attitude and reading for the grade three low reading achievement students.

This hypothesis was accepted. The analysis of covariance F ratio of 1.177 was not significant at the .05 level of confidence (see Table IV.8). The R-square of .101 was not significant for a small sample.

Hypothesis 9: There will be no significant relationships between attitude and reading for the grade six low reading achievement students.

This hypothesis was accepted. The analysis of covariance F ratio of 1.022 was not significant at the .05 level of confidence (see Table IV.9).

TABLE IV.8

ANALYSIS OF VARIANCE FOR THE RELATIONSHIP BETWEEN ATTITUDES AND READING FOR GRADE THREE LOW READING ACHIEVEMENT STUDENTS

Effects	Sum of Squares	df	F	p
Attitude	54.4	2	1.177	ns
Total	539.833	23		
R-Square	.101			

TABLE IV.9

ANALYSIS OF VARIANCE FOR THE RELATIONSHIP BETWEEN ATTITUDES AND READING FOR GRADE SIX LOW READING ACHIEVEMENT STUDENTS

Effects	Sum of Squares	df	F	p
Attitude	50.762	2	1.022	ns
Total	547.217	22		
R-Square	.305			

Hypothesis 10: There will be no significant relationship between grade and attitudes toward reading for all students included in the sample.

This hypothesis was accepted. The analysis of covariance F ratio of .602 was not significant at the .05 level of confidence (see Table IV.10).

TABLE IV.10

ANALYSIS OF VARIANCE FOR THE RELATIONSHIP BETWEEN ATTITUDES AND READING FOR ALL STUDENTS IN THE SAMPLE

Effects	Sum of Squares	df	F	p
Grade	54.8	1	.602	ns
Total	12449.434	137		
R-Square	.004			

Hypothesis 11: The joint effects of sex and attitudes on reading will be insignificant for all grade three students in the sample.

Table IV.11 presents a two-way analysis of variance for the effects of sex and attitudes toward reading on reading achievement for all grade three

students in the sample. The null hypothesis was rejected as the F ratio of 6.704 for attitude effects was significant at the .05 level of confidence. The finding was congruent with the evidence reprinted in the bivariate analysis reported in Table IV.11.

TABLE IV.11

TWO-WAY ANALYSIS OF VARIANCE FOR THE EFFECTS OF SEX AND ATTITUDES TOWARD READING ON READING ACHIEVEMENT FOR GRADE THREE STUDENTS ONLY

Effects	Sum of Squares	df	F	p
Sex	521.145	1	3.45	ns
Attitude	2025.391	2	6.704	.002
Sex * Attitude	127.295	2	.421	ns
R-Square	.213			

Hypothesis 12: The joint effects of sex and attitudes on reading will be insignificant for grade six.

This hypothesis was rejected. The two-way analysis of variance F ratio of 5.419 for the attitude variable was significant at the .01 level of confidence (see Table IV.12).

TABLE IV.12

TWO-WAY ANALYSIS OF VARIANCE FOR THE EFFECTS OF SEX
AND ATTITUDES TOWARD READING ON READING ACHIEVEMENT
FOR GRADE SIX STUDENTS ONLY

Effects	Sum of Squares	df	F	p
Sex	732.483	1	2.82	ns
Attitude	2813.617	2	5.419	.007
Sex * Attitude	234.065	2	.451	ns
R-Square	.195			

Hypothesis 13: None of the effects of grade level, sex, or attitude on reading achievement will be significant for all students in the sample.

This hypothesis was rejected when the grade three and grade six data were pooled, that is, the effects of grade, sex and attitudes were significant. As would be expected, this result confirmed the findings reported in Table 1. Grade, sex, and attitude effects accounted for about forty percent of the variance in reading comprehension (100 R-square = 39.9).

TABLE IV.13

THREE-WAY ANALYSIS OF VARIANCE FOR THE EFFECTS OF GRADE,
SEX, AND ATTITUDES TOWARD READING ON READING
ACHIEVEMENT FOR ALL STUDENTS IN THE SAMPLE

Effects	Sum of Squares	df	F	p
Grade	8544.777	1	41.614	.001
Sex	1201.743	1	5.853	.02
Attitude	4555.434	2	11.093	.001
Grade * Sex	13.405	1	13.405	ns
Grade * Attitude	327.280	2	.797	ns
Sex * Attitude	293.706	2	146.853	ns
Grade * Sex * Attitude	67.652	2	8.132	ns
R-Square	.399			

Discussion of Results

The results obtained in the previous section were supportive of the theory of attitude and reading. Thus, it was found that attitudes affect reading in grades three and six.

However, the results also indicated that within student achievement categories the attitude effects were

negligible. The variation in attitude for high performers in reading was modest, therefore there was no effect. Attitudes did not affect comprehension for the high reading students in grades three or six. The same was true of average readers and low readers in grades three and six.

One unanticipated finding was the relationship between sex and reading comprehension. For both grade three and grade six samples, girls outperformed boys. This has been a common research finding. Dwyer (1973) suggests that sex differences in reading are based on one of the following categories:

1. Differential rate or level of maturation--
Girls are considered to be more advanced developmentally than boys and are thus more ready to learn to read.
2. Reader content--Content is sometimes considered to be more geared to girls' interest than to boys'.
3. Negative treatment of boys by female teachers--
Negative or inferior treatment in specific teacher-pupil interactions is held responsible for boys' lower reading achievement.
4. Cultural expectations for the male role--
Boys' perceptions of school and reading as inappropriate to or in conflict with development of the male sex role may depress boys' achievement.

(p. 455)

More recently, neurologists Geschwind and Behan (1982) have pointed out a genetic explanation for such learning problems. They suggest,

The brain has two hemispheres, each controlling different functions. The right half reigns over spatial skills while the left holds sway over language--at least in most of the 90 percent of the population that is right-handed. But sometimes the right hemisphere usurps control of language especially in left-handers. Some neurologists call this exception "anomalous dominance." (p. 63)

Tables IV.3 and IV.13 support the findings of sex differences and reading achievement. The three-way ANOVA indicated that attitude effects are significant over and above both grade and sex effects. Similarly, sex effects are significant over and above grade and attitude effects. The same findings were indicated by the correlation coefficients (Table IV.1).

One factor must be noted in accounting for the outcome of the results of this study. This is the population. All three schools lie on the outskirts of a metropolitan area, and the families tend to follow a rural lifestyle, with the majority of families on modest incomes obtained from fishing or farming. One of the samples was obtained from a community that has a high unemployment rate due to the fact that a mining industry closed down a few years ago. Thus the results obtained in this sample, though supportive of current reading theory, would most probably not parallel in detail those based on samples from different socioeconomic backgrounds. Nevertheless, it is interesting to note from a theoretical

perspective that basic theory in reading is supported by samples that deviate somewhat from the Newfoundland norm.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of Findings

The purpose of this study was to investigate the possibility of a statistically significant relationship between attitudes toward reading and reading achievement in grades three and six.

The main hypotheses of the study, expressed in null terms, were as follows:

1. There will be no significant relationships between sex and reading achievement, grade and reading achievement, and attitude and reading achievement for all students included in the sample.
2. There will be no significant relationships between sex and reading achievement, and attitude and reading achievement in the grade three sample.
3. There will be no significant relationships between sex and reading, and attitude and reading in the grade six sample.
4. There will be no significant relationships between attitude and reading for the grade three high reading achievement students.

5. There will be no significant relationships between attitude and reading for the grade six high reading achievement students.

6. There will be no significant relationships between attitude and reading for the grade three average reading achievement students.

7. There will be no significant relationships between attitude and reading for the grade six average reading achievement students.

8. There will be no significant relationships between attitude and reading for the grade three low reading achievement students.

9. There will be no significant relationships between attitude and reading for the grade six low reading achievement students.

10. There will be no significant relationships between grade and attitudes toward reading for all students included in the sample.

11. The joint effects of sex and attitudes on reading will be insignificant for all grade three students in the sample.

12. The joint effects of sex and attitudes on reading will be insignificant for grade six.

13. None of the effects of grade level, sex, or attitude on reading will be significant for all students in the sample.

Approximately one hundred and fifty students from three different schools, under the jurisdiction of the Avalon Consolidated School Board, participated in the investigation. The students comprised all of the grades three and six students in the aforementioned schools. These particular grades were chosen partially to investigate whether there was a significant attitude difference between students, in particular primary and elementary grades. Also, it was of interest to compare subjects from both the primary and elementary grades since in each the role of reading is somewhat different. The primary children are learning the mechanics of how to read and the elementary children are learning how to use their reading abilities to acquire other information and knowledge.

Burns and Roe (1976) provide an overview of reading programs in the schools. They say that

In the primary years a beginning is provided by assessing and developing readiness, or the attitudes and skills necessary for initial reading. Reading aloud of stories and poems to children as well as encouraging contact with books and pictures are ways of developing favorable attitudes toward reading. Specific skills such as auditory and visual discrimination of letters and sounds and verbal facility are focused upon specifically. (p. 28)

They go on to discuss the emphasis of elementary reading programs by saying,

While continuing to focus attention upon the skills introduced in the primary years, teachers emphasize many more complicated reading tasks during the intermediate years. (p. 29)

All students were administered the Gates-MacGinitie Reading Tests and the Estes. The Gates-MacGinitie Reading Tests are a series of tests designed to measure group and individual achievement. Each grade was given the appropriate form for that grade. All students were also given the Estes, a test which measures attitude toward reading.

After the data were collected, an initial interpretation was undertaken by running frequency distributions and histograms using the raw data. These distributions were used to place the data into categories of high, average, and low reading and positive, neutral and negative attitudes.

A one-way ANOVA was used in the final interpretation to measure the interactions of reading achievement with attitudes toward reading in grades three and six. A two-way ANOVA was used to determine the influence of grade on the interaction of reading and attitude toward reading. This was also used to determine the effect of sex on the interaction of reading achievement and attitude toward reading.

The following are a summary of the findings of the hypotheses tested:

Hypothesis 1:

The null hypothesis was rejected since the correlations between sex and reading, grade and reading, and attitude and reading were significant at the .001 level of significance.

Hypothesis 2:

The null hypothesis for sex and reading at the grade three level was rejected. Since the attitude-reading relationship was significant at the .001 level, the hypothesis was also rejected.

Hypothesis 3:

The null hypothesis was rejected for the grade six students since a bivariate analysis indicated the relationship between sex differences and reading at the grade six level was significant at the .05 level, favouring girls.

Hypothesis 4:

This hypothesis was accepted since in an analysis of variance for the relationship between attitudes and reading for grade three high reading achievement students, the F ratio was not significant at the .05 level of confidence.

Hypothesis 5:

Hypothesis 5 was accepted since an analysis of variance for the relationship between attitudes and reading for all grade six high reading achievement students indicated the relationship was not significant at the .05 level of confidence.

Hypothesis 6:

This hypothesis was accepted since the results of an analysis of variance for the relationship between attitudes and reading for the grade three average reading achievement students indicated that the F ratio was not significant at the .05 level of confidence.

Hypothesis 7:

This hypothesis was accepted as an analysis of variance for the relationship between attitudes and reading for the grade six average reading achievement students indicated the F ratio was not significant at the .05 level of confidence.

Hypothesis 8:

An analysis of covariance F ratio of 1.177 was not significant at the .05 level of confidence, thus this hypothesis was accepted.

Hypothesis 9:

The analysis of covariance F ratio of 1.022 was not significant at the .05 level of confidence, thus this hypothesis was accepted.

Hypothesis 10:

This hypothesis was accepted as the analysis of covariance F ratio of .602 was not significant at the .05 level of confidence.

Hypothesis 11:

The null hypothesis was rejected as the F ratio of 6.704 for attitude effects was significant at the .05 level of confidence.

Hypothesis 12:

A two-way analysis of variance F ratio of 5.419 for the attitude variable was significant at the .01 level of confidence, thus the null hypothesis was rejected.

Hypothesis 13:

This hypothesis was rejected as when the grade three and grade six data were put together, the effects of grade, sex and attitudes were significant at the .05 level of confidence.

Conclusions and Discussion

A common research finding has been the conclusion that girls outperform boys in reading achievement. Dwyer (1973) suggests that sex differences in relationship to reading achievement are based on one of four factors. In summary, these factors are the differential rate or level of maturation; content of readers; the negative treatment of boys by female teachers; and the differential cultural expectations for the male role. It was proposed in this article that the demands of the educational process are not compatible with cultural expectations for the male sex role and thus interfere with the acquisition of reading skills. Geschwind and Behan (1982) contend that sex differences and reading achievement are attributed to genetic differences in the brain hemispheres of both sexes. Thus, it was an interesting finding in this study to find in both the grade three and grade six samples the girls outperformed the boys. Tables IV.3 and IV.13 support and illustrate the findings of sex differences and reading achievement.

Alexander and Filler (1976) commented in The International Reading Association publication that research on attitude development and maintenance is still in its infancy. A literature search revealed only a limited number of studies that specifically focused

on attitudes toward reading. Therefore, one objective of the study was to ascertain the importance of attitudes in determining reading achievement in grades three and six. The conclusions of the study, derived from the findings of the data, were supportive of the theory that attitude and reading are directly related. It was found that attitudes affect reading in grades three and six.

The data also indicated that within certain student achievement categories the effects of attitude are negligible. It was found that attitudes did not affect comprehension for the high achievement reading students in grades three and six, due possibly to the fact that good readers seem to have uniformly positive attitudes toward reading.

One unanticipated finding was that sex was not a determinant of differences in reading comprehension for grade three pupils. However, by grade six, there was a strong relationship between sex and reading, in favor of girls.

Therefore, it may be surmised that certain factors cause the attitudes of boys toward reading to wane in the elementary school years. It can thus be concluded that more should be done in the schools to foster positive attitudes at this critical time. One way to accomplish this would be to have school libraries use book displays that focus on male interests (e.g., car racing, sports,

or space adventure). In the classroom book discussion and book clubs could be positive strategies for fostering a love of books and reading. Oral and written book reports, to assist in student sharing of interesting books, could promote an avid interest in reading.

With regard to the findings of the study, it is important to consider the limitations of the study. As previously mentioned, the school records indicated that the majority of the students in the sample were from communities with a somewhat low socioeconomic background. Given the limitations of the study, the obtained results could not be generalized to other schools with students of different socioeconomic background.

Recommendations

The following recommendations are proposed as a result of the present study:

1. A research study investigating sex differences in reading should be conducted in Newfoundland schools. In this study girls outperformed boys in reading achievement. Subsequent studies should ascertain if indeed sex differences in reading can be attributed to the teacher variable. As Dwyer (1973) suggests,

Some researchers have searched for evidence that boys find it difficult to identify with predominantly female

elementary teachers, and that this has, an adverse effect on their motivation; or that these predominantly female teachers find it difficult to relate to their male pupils and are therefore more critical and punitive toward them. (p. 459)

Indeed, Newfoundland, with many schools segregated on the basis of sex, would be a suitable place to conduct such a study, since the control variable of sex would be automatically accounted for.

2. The research design should be replicated with a population from a different socioeconomic background from the one used in this study, to ascertain if attitude and achievement are affected by socioeconomic background.

3. It would be worthwhile to conduct a similar study with high school students to ascertain if attitude affects reading achievement to the same degree in the high school. Also, it would be valuable to ascertain if the sex differences in reading are as pronounced in the high school as they are in the primary and elementary grades. This could have important implications for strategies and materials utilized to foster positive attitudes toward reading in the high school, as well as promoting changes in the high school curriculum.

4. A study should be conducted with an all male group to ascertain if the content of reading material affects attitude toward reading. A group of students could use a reading content that contained a more

"masculine content" than the traditional reader utilized in the developmental reading program.

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APPENDIX A

The Estes

The Estes

The Estes (1971) was used to measure attitudes toward reading. It is a summated rated Likert scale, on which subjects respond to questions on a five-point measure of strongly agree to strongly disagree. The Estes was also read to all subjects to eliminate any problems that younger students or remedial students would have with the printed version. _____

The following are the twenty responses that make up the Estes.

1. Reading is for learning but not for enjoyment.
2. Money spent on books is well spent.
3. There is nothing to be gained from reading books.
4. Books are a bore.
5. Reading is a good way to spend spare time.
6. Sharing books in class is a waste of time.
7. Reading is only for grade grubbers.
8. Reading turns me on.
9. Books aren't usually good enough to finish.
10. Reading is rewarding to me.
11. Reading becomes boring after about an hour.
12. Most books are too long and dull.
13. Free reading doesn't teach anything.
14. There should be more time for free reading during the school day.

15. There are many books which I hope to read.
16. Books should not be read except for class requirements.
17. Reading is something I can do without.
18. A certain amount of summer vacation should be set aside for reading.
19. Books make good presents.
20. Reading is dull.



